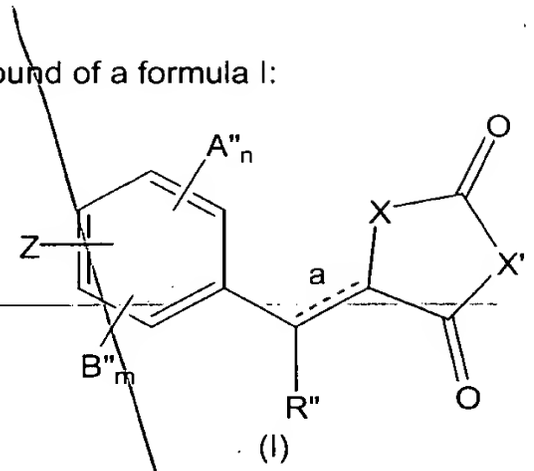
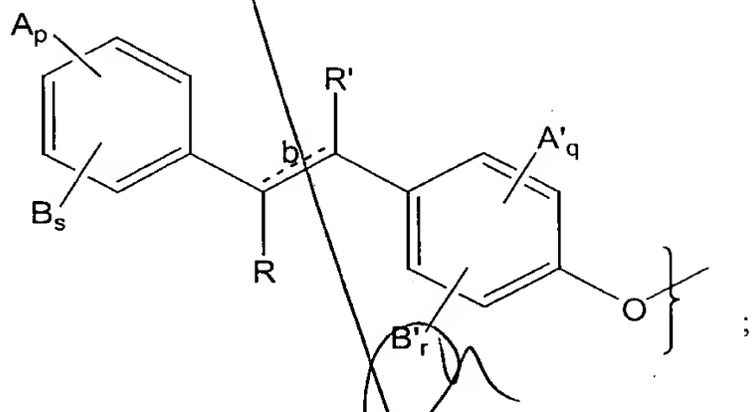
What is claimed is:

1. A compound of a formula I:



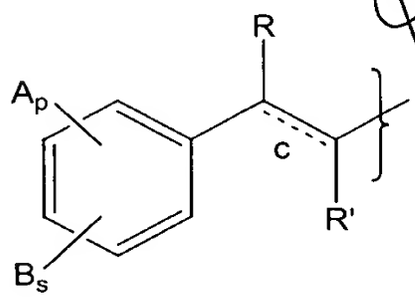
(I)

wherein Z is



;

H; A"; B"; or



n, m, q and r are independently integers from zero to 4 provided that n + m ≤ 4 and q + r ≤ 4; p and s are independently integers from zero to 5 provided that p + s ≤ 5; a, b and c are double bonds which may be present or absent;

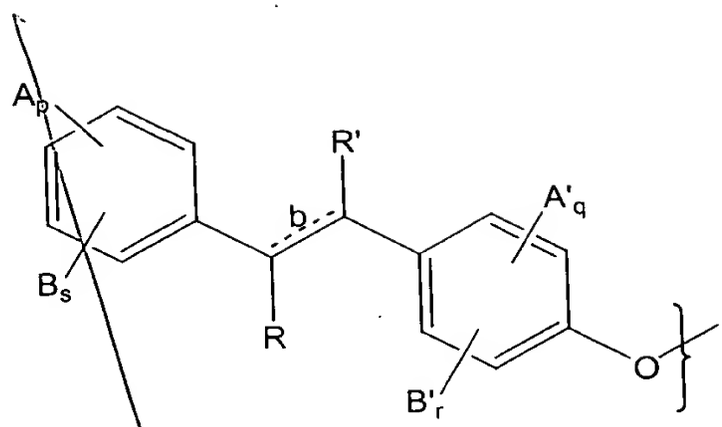
when present; the double bonds may be in the E or Z configuration and, when absent, the resulting stereocenters may have the R- or S- configuration;

R, R' and R'' are independently H, C_1-C_{20} linear or branched alkyl, C_2-C_{20} linear or branched alkenyl, $-CO_2Z'$, wherein Z' is H, sodium, potassium, or other pharmaceutically acceptable counter-ion such as calcium, magnesium, ammonium, tromethamine, and the like; $-CO_2R'''$, $-NH_2$, $-NHR'''$, $-NR_2'''$, -OH, -OR''', halo, substituted C_1-C_{20} linear or branched alkyl or substituted C_2-C_{20} linear or branched alkenyl, wherein R''' is C_1-C_{20} linear or branched alkyl or linear or branched alkenyl;

A, A' and A'' are independently H, C_1-C_{20} acylamino;
C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkoxycarbonyl; C_1-C_{20} alkoxy;
C_1-C_{20} alkylamino; C_1-C_{20} alkylcarboxylamino; carboxyl; cyano; halo; hydroxy;

B, B' and B'' are independently H;
C_1-C_{20} acylamino; C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkenoyl; C_1-C_{20} alkoxycarbonyl;
C_1-C_{20} alkoxy; C_1-C_{20} alkylamino;
C_1-C_{20} alkylcarboxylamino; aroyl, aralkanoyl; carboxyl; cyano; halo; hydroxy;
or A and B together, or A' and B' together, or A'' and B'' together, may be joined to form a methylenedioxy or ethylenedioxy group; and
X, X' are independently -NH, -NR''', O or S.

2. A compound according to claim 1, wherein Z is

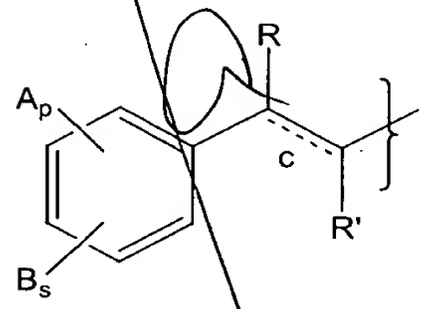


3. A compound according to claim 1, wherein Z is hydrogen.

4. A compound according to claim 1, wherein Z is A".

5. A compound according to claim 1, wherein Z is B".

6. A compound according to claim 1, wherein Z is

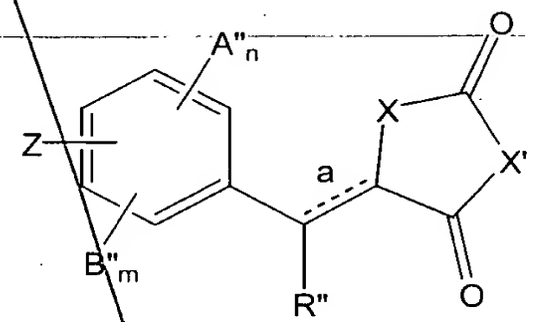


7. A compound according to claim 2, wherein X is sulfur, X' is -NH; A''_n, B", B', A_p, A'_q, R and R" are all hydrogen.

8. A compound according to claim 7, wherein B is methoxy, s is 2 and R' is carbomethoxy.

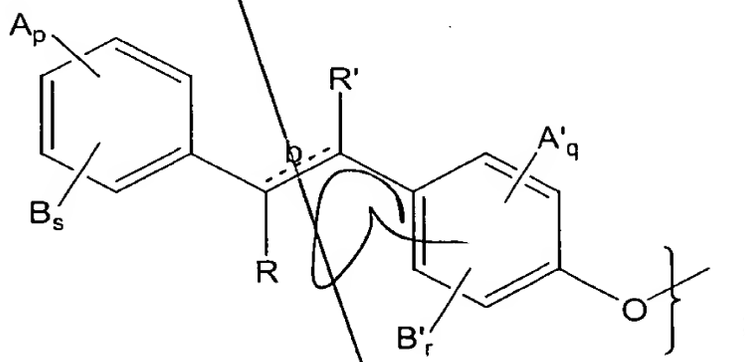
9. A compound according to claim 8, which is 5-(4-(4-(1-carbomethoxy-2-(3,5-dimethoxy phenyl) ethenyl)-phenoxy)-benzyl)-2,4-thiazolidinedione.

10. A pharmaceutical composition comprising a therapeutically effective amount of a compound of the formula I:



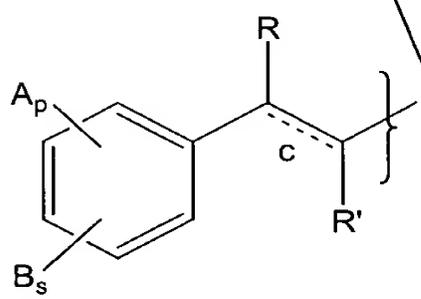
(I)

wherein Z is



;

H; A"; B"; or



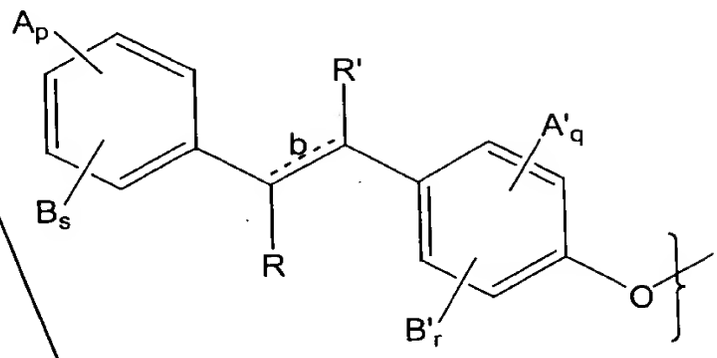
n, m, q and r are independently integers from zero to 4 provided that n + m ≤ 4 and q + r ≤ 4; p and s are independently integers from zero to 5 provided that p + s ≤ 5; a, b and c are double bonds which may be present or absent; when present, the double bonds may be in the E or Z configuration and, when absent, the resulting stereocenters may have the R- or S- configuration;

R, R' and R'' are independently H, C_1-C_{20} linear or branched alkyl, C_2-C_{20} linear or branched alkenyl, -CO_2Z', where Z' is H, sodium, potassium, or other pharmaceutically acceptable counter-ion such as calcium, magnesium, ammonium, tromethamine, and the like; -CO_2R''', -NH_2, -NHR''', -NR_2''', -OH, -OR''', halo, substituted C_1-C_{20} linear or branched alkyl or substituted C_2-C_{20} linear or branched alkenyl, wherein R''' is C_1-C_{20} linear or branched alkyl or linear or branched alkenyl;

A, A' and A'' are independently H, C_1-C_{20} acylamino;
C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkoxycarbonyl; C_1-C_{20} alkoxy;
C_1-C_{20} alkylamino; C_1-C_{20} alkylcarboxylamino; carboxyl; cyano; halo; hydroxy;

B, B' and B'' are independently H;
C_1-C_{20} acylamino; C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkenoyl; C_1-C_{20} alkoxycarbonyl;
C_1-C_{20} alkoxy; C_1-C_{20} alkylamino;
C_1-C_{20} alkylcarboxylamino; aroyl, aralkanoyl; carboxyl; cyano; halo; hydroxy;
or A and B together, or A' and B' together, or A'' and B'' together, may be joined to form a methylenedioxy or ethylenedioxy group; and
X, X' are independently -NH, -NR''', O or S.
in a physiologically acceptable carrier.

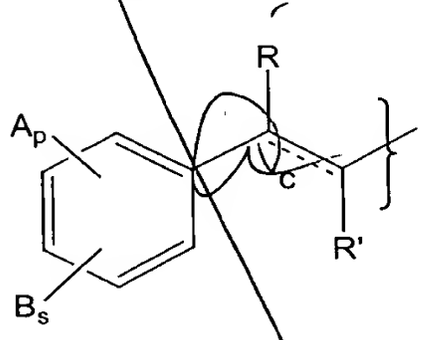
11. A composition according to claim 10, wherein Z is



12. A composition according to claim 10, wherein Z is A''.

13. A composition according to claim 10, wherein Z is B''.

14. A composition according to claim 10, wherein Z is

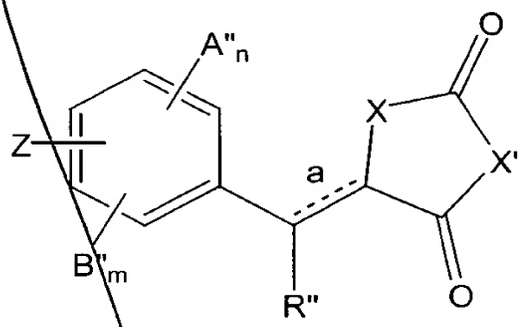


15. A composition according to claim 10, wherein X is sulfur, X' is -NH and A'', B'', A'_q, B', A_p, R and R'' are all hydrogen.

16. A composition according to claim 15, wherein R' is carbomethoxy; B is methoxy and s is 2.

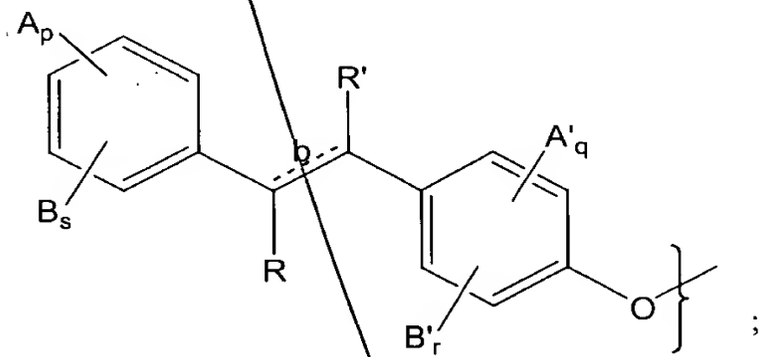
17. A composition according to claim 16, wherein said compound is 5-(4-(4-(1-carbomethoxy-2-(3,5 dimethoxy phenyl) ethenyl) -phenoxy)-benzyl)-2,4-thiazolidinedione.

18. A method of treating diabetes comprising the steps of administering to a subject suffering from a diabetic condition, a therapeutically effective amount of a compound according to the formula I:



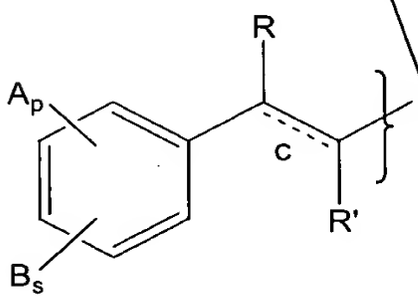
(I)

wherein Z is



;

H; A"; B"; or



n, m, q and r are independently integers from zero to 4 provided that n + m ≤ 4 and q + r ≤ 4; p and s are independently integers from zero to 5 provided that p + s ≤ 5; a, b and c are double bonds which may be present or absent; when present, the double bonds may be in the E or Z configuration and, when absent, the resulting stereocenters may have the R- or S- configuration;

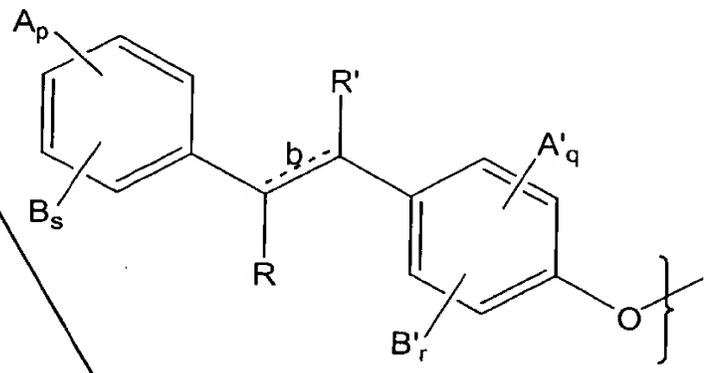
R, R' and R" are independently H, C_1-C_{20} linear or branched alkyl, C_2-C_{20} linear or branched alkenyl, -CO_2Z', where Z' is H, sodium, potassium, or other pharmaceutically acceptable counter-ion such as calcium, magnesium, ammonium, tromethamine, and the like; -CO_2R"', -NH_2, -NHR"', -NR_2"', -OH, -OR"', halo, substituted C_1-C_{20} linear or branched alkyl or substituted C_2-C_{20} linear or branched alkenyl, wherein R"' is C_1-C_{20} linear or branched alkyl or linear or branched alkenyl;

A, A' and A" are independently H, C_1-C_{20} acylamino;
C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkoxycarbonyl; C_1-C_{20} alkoxy;
C_1-C_{20} alkylamino; C_1-C_{20} alkylcarboxylamino; carboxyl; cyano; halo; hydroxy;

B, B' and B" are independently H;
C_1-C_{20} acylamino; C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkenoyl; C_1-C_{20} alkoxycarbonyl;
C_1-C_{20} alkoxy; C_1-C_{20} alkylamino;
C_1-C_{20} alkylcarboxylamino; aroyl, aralkanoyl; carboxyl; cyano; halo; hydroxy;

or A and B together, or A' and B' together, or A'' and B'' together, may be joined to form a methylenedioxy or ethylenedioxy group; and
X, X' are independently -NH, -NR''', O or S,
in a physiologically acceptable carrier.

19. A method according to claim 18, wherein Z is

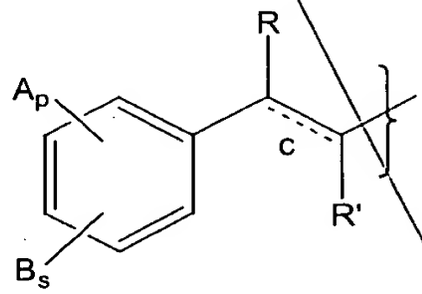


20. A method according to claim 19, wherein Z is H.

21. A method according to claim 18, wherein Z is A''.

22. A method according to claim 18, wherein Z is B''.

23. A method according to claim 18, wherein Z is

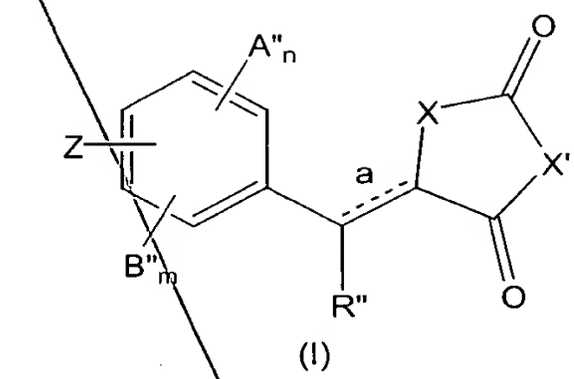


24. A method according to claim 18, wherein R'', A'', B'', A'_q, B', A_p and R are all hydrogen, X is sulfur and X' is NH.

25. A method according to claim 18, wherein R'' is carbomethoxy and B is methoxy and s is 2.

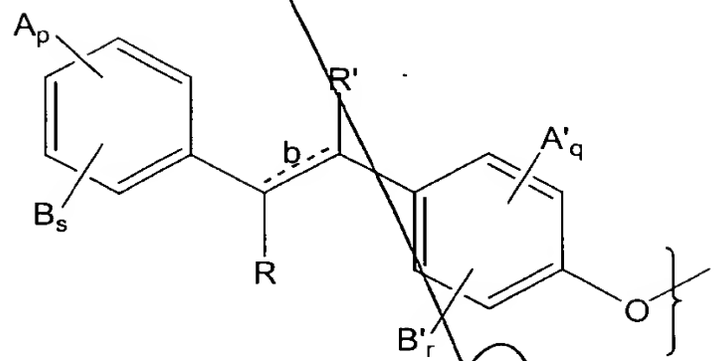
26. A method according to claim 18, wherein said compound is 5-(4-(4-(1-carbomethoxy-2-)3,5-dimethoxy phenyl) ethenyl)-phenoxy)-benzyl)-2,4-thiazolidinedione.

27. A method of treating inflammation comprising the steps of administering to a subject suffering from an inflammatory condition, a therapeutically effective amount of a compound according to the formula I:



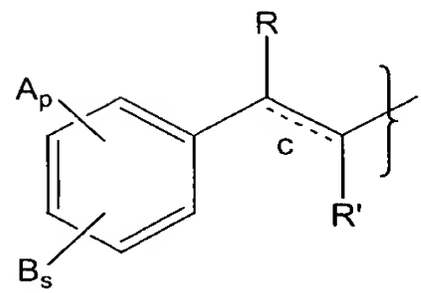
(I)

wherein Z is



;

H; A"; B"; or



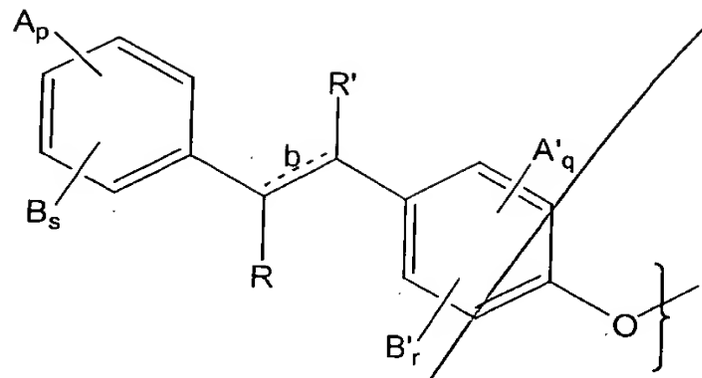
n, m, q and r are independently integers from zero to 4 provided that n + m ≤ 4 and q + r ≤ 4; p and s are independently integers from zero to 5 provided that p + s ≤ 5; a, b and c are double bonds which may be present or absent; when present, the double bonds may be in the E or Z configuration and, when absent, the resulting stereocenters may have the R- or S- configuration;

R, R' and R" are independently H, C_1-C_{20} linear or branched alkyl, C_2-C_{20} linear or branched alkenyl, -CO_2Z', where Z' is H, sodium, potassium, or other pharmaceutically acceptable counter-ion such as calcium, magnesium, ammonium, tromethamine, and the like; -CO_2R"', -NH_2, -NHR"', -NR_2"', -OH, -OR"', halo, substituted C_1-C_{20} linear or branched alkyl or substituted C_2-C_{20} linear or branched alkenyl, wherein R"' is C_1-C_{20} linear or branched alkyl or linear or branched alkenyl;

A, A' and A" are independently H, C_1-C_{20} acylamino;
C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkoxycarbonyl; C_1-C_{20} alkoxy;
C_1-C_{20} alkylamino; C_1-C_{20} alkylcarboxylamino; carboxyl; cyano; halo; hydroxy;

B, B' and B" are independently H;
C_1-C_{20} acylamino; C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkenoyl; C_1-C_{20} alkoxycarbonyl;
C_1-C_{20} alkoxy; C_1-C_{20} alkylamino;
C_1-C_{20} alkylcarboxylamino; aroyl, aralkanoyl; carboxyl; cyano; halo; hydroxy;
or A and B together, or A' and B' together, or A" and B" together, may be joined to form a methylenedioxy or ethylenedioxy group; and
X, X' are independently -NH, -NR"', O or S,
in a physiologically acceptable carrier.

28. A method according to claim 27, wherein Z is

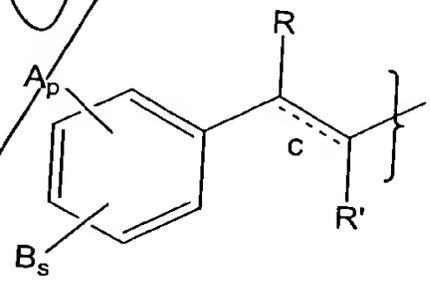


29. A method according to claim 27, wherein Z is H.

30. A method according to claim 27, wherein Z is A''.

31. A method according to claim 27, wherein Z is B''.

32. A method according to claim 27, wherein Z is

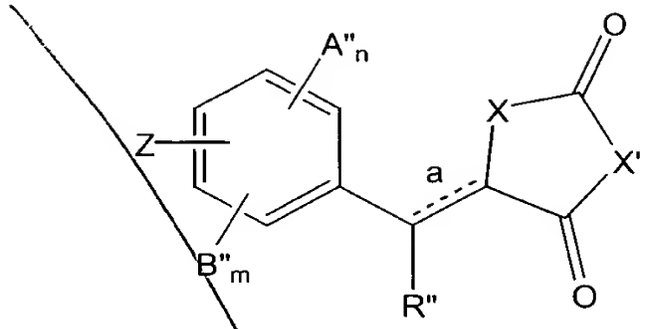


33. A method according to claim 27, wherein R'', A'', B'', A'_q, B', A_p and R are all hydrogen, X is sulfur and X' is NH.

34. A method according to claim 33, wherein R' is carbomethoxy and B is methoxy and s is 2.

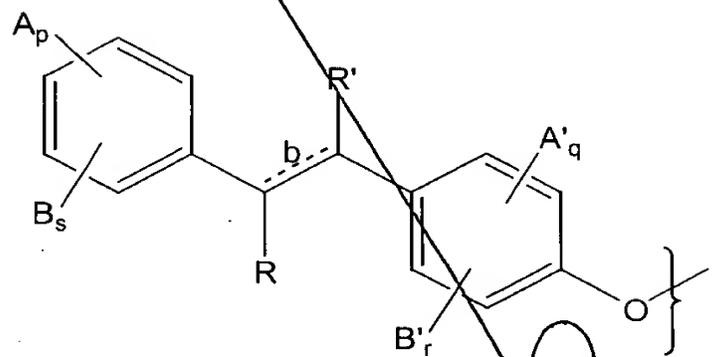
35. A method according to claim 27, wherein said compound is 5-(4-(4-(1-carbomethoxy-2-)3,5-dimethoxy phenyl) ethenyl)-phenoxy)-benzyl)-2,4-thiazolidinedione.

36. A method of treating immunological disease comprising the steps of administering to a subject suffering from an immunological disease, a therapeutically effective amount of a compound according to the formula I:



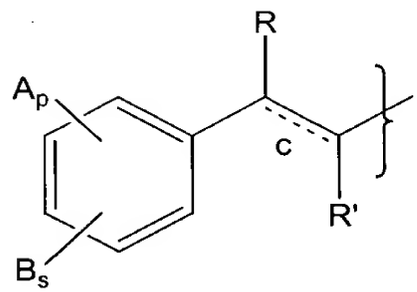
(I)

wherein Z is



;

H; A"; B"; or



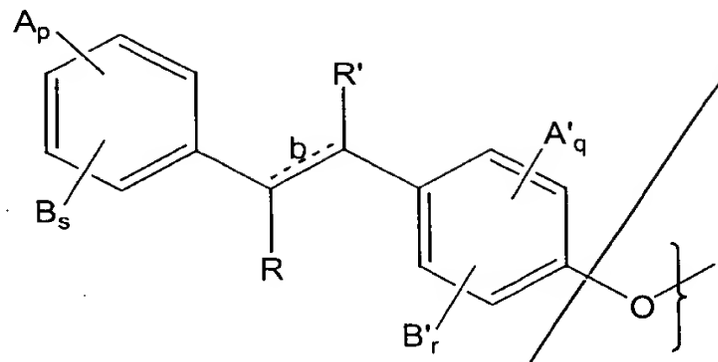
n, m, q and r are independently integers from zero to 4 provided that n + m ≤ 4 and q + r ≤ 4; p and s are independently integers from zero to 5 provided that p + s ≤ 5; a, b and c are double bonds which may be present or absent; when present, the double bonds may be in the E or Z configuration and when absent, the resulting stereocenters may have the R- or S- configuration;

R, R' and R" are independently H, C_1-C_{20} linear or branched alkyl, C_2-C_{20} linear or branched alkenyl, -CO_2Z', where Z' is H, sodium, potassium, or other pharmaceutically acceptable counter-ion such as calcium, magnesium, ammonium, tromethamine, and the like; -CO_2R"', -NH_2, -NHR"', -NR_2"', -OH, -OR"', halo, substituted C_1-C_{20} linear or branched alkyl or substituted C_2-C_{20} linear or branched alkenyl, wherein R"' is C_1-C_{20} linear or branched alkyl or linear or branched alkenyl;

A, A' and A" are independently H, C_1-C_{20} acylamino;
C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkoxycarbonyl; C_1-C_{20} alkoxy;
C_1-C_{20} alkylamino; C_1-C_{20} alkylcarboxylamino; carboxyl; cyano; halo; hydroxy;

B, B' and B" are independently H,
C_1-C_{20} acylamino; C_1-C_{20} acyloxy; C_1-C_{20} alkanoyl;
C_1-C_{20} alkenoyl; C_1-C_{20} alkoxycarbonyl;
C_1-C_{20} alkoxy; C_1-C_{20} alkylamino;
C_1-C_{20} alkylcarboxylamino; aroyl, aralkanoyl; carboxyl; cyano; halo; hydroxy;
or A and B together, or A' and B' together, or A" and B" together, may be joined to form a methylenedioxy or ethylenedioxy group; and
X, X' are independently -NH, -NR"', O or S,
in a physiologically acceptable carrier.

37. A method according to claim 36, wherein Z is

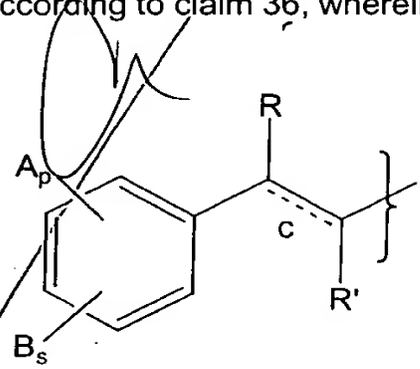


38. A method according to claim 36, wherein Z is H.

39. A method according to claim 36, wherein Z is A''.

40. A method according to claim 36, wherein Z is B''.

41. A method according to claim 36, wherein Z is



42. A method according to claim 36, wherein R'', A'', B'', A'_q, B', A_p and R are all hydrogen, X is sulfur and X' is NH.

43. A method according to claim 42, wherein R' is carbomethoxy and B is methoxy and s is 2.

44. A method according to claim 36, wherein said compound is 5-(4-(4-(1-carbomethoxy-2-)3,5-dimethoxy phenyl) ethenyl)-phenoxy)-benzyl)-2,4-thiazolidinedione.

45. A method of inhibiting the activity of TNF-alpha, IL-1, IL-6 or COX-2 which comprises administering to a host in need of such inhibition an effective amount of a compound according to claim 1.

46. The method of treating inflammation, inflammatory or immunological disease which comprises administering to a host in need of such treatment an effective amount of a compound according to claim 1.

47. The method of inhibiting the undesired action of cytokine or cyclooxygenase which comprises administering to a host in need of such inhibition an effective amount of a compound according to claim 1.

48. The method of treating an inflammatory disease mediated by cytokines or cyclooxygenase which comprises administering to a host in need of such treatment a compound according to claim 1.

49. The method of treating insulin resistance which comprises administering to a host in need of such treatment an effective amount of a compound according to claim 1.

50. The method of treating hyperlipidemia which comprises administering to a host in need of such treatment an effective amount of a compound according to claim 1.

51. The method of treating coronary heart disease which comprises administering to a host in need of such treatment an effective amount of a compound according to claim 1.

52. The method of treating multiple sclerosis which comprises administering to a host in need of such treatment an effective amount of a compound according to claim 1.

53. The method of treating cancer which comprises administering to a host in need of such treatment an effective amount of a compound according to claim 1.

54. The method of claim 45, 46, 47, 48, 49, 50, 51, 52 or 53 wherein the compound is 5-(4-(4-(1-carbomethoxy)-2-(3,5-dimethoxyphenyl)-ethenyl)-phenoxy)-benzyl)-2,4-thiazolidinedione.

55. A compound according to claim 1 selected from the group consisting of:

3-(3,5-dimethoxyphenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylic acid,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylamide,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-N,N-dimethyl-acrylamide,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-N-methoxy,-N-methyl-acrylamide,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-propionic acid methyl ester,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-acrylic acid methyl ester,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-propionic acid,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-propionic acid,

3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-acrylic acid, and
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-propionic acid methyl ester.

56. A compound according to claim 1 which is 3-(3,5-dimethoxyphenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylic acid.

57. A pharmaceutical composition comprising a therapeutically effective amount of a compound selected from the group consisting of
3-(3,5-dimethoxyphenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylic acid,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylamide,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-N,N-dimethyl-acrylamide,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-N-methoxy,-N-methyl-acrylamide,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-propionic acid methyl ester,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-acrylic acid methyl ester,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-propionic acid,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-propionic acid,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-acrylic acid, and
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-propionic acid methyl ester,

together with a physiologically acceptable carrier therefor.

58. The pharmaceutical composition of claim 57 wherein said compound is 3-(3,5-dimethoxyphenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylic acid.

59. The method of claim 18, 45, 46, 47, 48, 49, 50, 51, 52 or 53 wherein said compound is selected from the group consisting of
3-(3,5-dimethoxyphenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylic acid,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylamide,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-N,N-dimethyl-acrylamide,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-N-methoxy,-N-methyl-acrylamide,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-propionic acid methyl ester,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-acrylic acid methyl ester,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-propionic acid,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-propionic acid,
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-phenoxy]-phenyl}-acrylic acid, and
3-(3,5-dimethoxy-phenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-propionic acid methyl ester.

60. The method of claim 59 wherein the compound is 3-(3,5-dimethoxyphenyl)-2-{4-[4-(2,4-dioxo-thiazolidin-5-ylmethyl)-phenoxy]-phenyl}-acrylic acid.

5

add B1

add C9